Pf-3202/nec/us/mh

## ABSTRACT OF THE DISCLOSURE

In a data multiplexing network system, a first wavelength multiplexing function unit sets a plurality of different wavelengths which correspond to a plurality of different service classes, respectively, and maps each packet into each correspondent-wavelength which corresponds to each service class, to which the each packet belongs, and multiplexes the correspondent-wavelengths for the plurality of different service classes for a data transmission at a multiplexed-wavelength through a wavelength division multiplexing network. A second wavelength multiplexing function unit receives the each correspondent-wavelength and fetches a packet from the each correspondent-wavelength.